

C1 (b) providing the halo implant to the semiconductor device, wherein the thin photoresist layer is used as a mask.

8. (Thrice Amended) A system for providing a halo implant to a semiconductor device comprising:

C2 means for providing a thin photoresist layer to the semiconductor device, wherein the thin photoresist layer is a thickness less than the gate height and covers a substantial amount of an active area comprising a source region and a drain region of the semiconductor device; and

means for providing the halo implant to the semiconductor device, wherein the thin photoresist layer is used as a mask.

IN THE ABSTRACT

C3 A method and system for providing a halo implant to a semiconductor device is disclosed. The method and system comprises providing a thin photoresist layer that is a thickness less than the gate height to the semiconductor device, wherein the thin photoresist layer covers a substantial amount of an active area comprising a source region and a drain region of the semiconductor device. The method and system further includes providing the halo implant to the semiconductor device, using the thin photoresist layer as a mask.

Utilizing this thin photoresist layer, taking into account other height variables, the source and drain regions can be opened only as needed. At a 45° angle, the implant can be delivered to all transistors in the circuit in the targeted area as well as getting only a large amount of the dose (up to ¾ of the dose) to the transistor edge which sits on the trench edge.